



PATENT Customer No. 22,428 Atty. Dkt. No. 080618-0237

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

John P. Cooke et al.

Title:

ENHANCEMENT OF VASCULAR FUNCTION BY MODULATION

OF ENDOGENOUS NITRIC OXIDE PRODUCTION OR ACTIVITY

Appl. No.:

10/618,835

Filing Date: 07/15/2003

Examiner:

J. Russel

Art Unit:

1654

INFORMATION DISCLOSURE STATEMENT **UNDER 37 CFR § 1.97(b)**

Mail Stop AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Under 37 CFR §§ 1.56 and 1.97(b), Applicants bring to the Examiner's attention the documents on the attached SB/08. This Information Disclosure Statement is being filed before the mailing date of a first Office action on the merits for the above-referenced application.

This application is a continuation of U.S. Application No. 10/060,252, filed February 1, 2002, now U.S. Pat. No. 6,646,006, which application is a continuation of U.S. Application 09/930,833, filed August 15, 2001, now abandoned, which application is a continuation of U.S. Application No. 09/075,509, filed May 8, 1998, now U.S. Pat. No. 6,337,321, which application is a continuation of 08/556,035, filed November 9, 1995, now U.S. Pat. No. 5,891,459, which application is a continuation-in-part of U.S. Application No. 08/336,159, filed November 8, 1994, now abandoned, which application is a continuation-in-part of 08/076,312, filed June 11, 1993, now U.S. Pat. No. 5,428,070.

A. Submitted Search Reports

Four search reports are submitted herewith.

PCT/US94/06203 (G42): This application is an international application that claims the benefit of the '312 application. The search report lists documents considered to be relevant by the searcher. All of the listed documents are believed of record.

PCT/US96/17241 (G43): This application is an international application that claims the benefit of the '035 application. The search report lists documents considered to be relevant by the searcher. Documents G1 and G3 are submitted herewith. The remaining documents are believed of record.

PCT/US97/13905 (G44): This application is an international application that claims the benefit of U.S. application 08/695,792, a continuation of the '035 application. The search report lists documents considered to be relevant by the searcher. Documents G8, G12, G13 and G16 are submitted herewith. The remaining documents are believed of record.

EP 97 93 8163 (G41): This application is an European application resulting from PCT/US97/13905. The search report lists documents considered to be relevant by the searcher, in addition to the references listed in the search report of international application PCT/US97/13905. Documents G19 – G22 are submitted herewith. The remaining documents are believed of record.

B. Documents Submitted to or cited by the Office in an earlier filed case

Documents G23 – G37 and G39 – G40 were cited by or submitted to the Office in at least one of Application No. 08/076,312, filed June 11, 1993; Application No. 08/336,159, filed November 8, 1994, and Application No. 08/556,035, filed November 9, 1995. As provided in 37 CFR §1.98(d), a copy of these documents are not being submitted since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent applications, upon which the present application claims priority benefit.

Documents G1 – G18 and G38 were cited by or submitted to the Office in related Application No. 08/796,298, filed February 7, 1997, or Application 08/764,919, filed December 16, 1996. Copies of these documents are submitted herewith.

Documents G24 and G25 are cited on Form PTO/SB/08 with ellipses in the title of the journal articles. Applicants note that the articles were cited by the Examiner in Application No. 08/556,035, filed November 9, 1995, in this manner.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

The Commissioner is hereby authorized to charge any fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or to credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Data

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Respectfully submitted,

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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	Substitute fo	r form 1449B	/PTO		Complete if Known	OIPE
	INFORMATION	ON DISCLO	SURE	Application Number	10/618,835	- 3
	STATEMENT	T BY APPLI	CANT	Filing Date	7/15/2003	~~~
	Data Culturalit	عديدا الممه	2004	First Named Inventor	John P. Cooke	JUL 1 6 2004 #
	Date Submit	tea: July 16,	, 2004	Group Art Unit	1654	\0 E/
	(use as many s	heets as ne	cessary)	Examiner Name	J. Russel	(g) of
Sheet	1	of	3	Attorney Docket Number	080618-0237	TRADEMA

				U.S. PATENT DOCUMENTS	6	
Examiner	Cite No.1	U.S. Patent 0		Name of Patentee or Applicant of	Date of Publication of	Pages, Columns, Lines, Where Relevant
Initials*		Number	Kind Code ² (if known)	Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear
	G1	4,029,773		BEIGLER ET AL.	06/14/1997	
	G2	4,154,813		KLEINBERG	05/15/1979	
	G3	4,847,240		RYSER ET AL.	07/11/1989	
	G4	4,954,526		COTTER ET AL.	09/04/1990	
	G5	5,157,022		BARBUL	10/20/1992	
	G6	5,385,937		STAMLER ET AL.	01/31/1995	
	G7	5,411,956		MIYAZAKI ET AL.	05/02/1995	
	G8	5,236,413		FERING	08/17/1993	
	G9	5,286,254		SHAPLAND ET AL.	02/15/1994	
	G10	5,318,531		LEONE	06/07/1994	
	G11	5,405,919		KEEFER ET AL.	04/11/1995	
	G12	5,482,925		HUTSELL	01/09/1996	
	G13	5,499,971		SHAPLAND ET AL.	03/19/1996	
	G14	5,569,198		RACCHINI	10/29/1996	
	G15	5,628,730		SHAPLAND ET AL.	05/131997	
	G16	5,634,895		IGO ET AL.	06/03/1997	
	G17	5,660,873		NIKOLAYCHIK ET AL.	08/26/1997	
	G18	5,665,077		ROSEN ET AL.	09/09/1997	

				FC	DREIGN PATENT DOCUMEN	TS		
Examiner Initials*	Cite No.1	Fo Office ³	reign Patent D Number ⁴	Oocument Kind Code ⁵ (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	G19	wo	97/16983		THE BOARD OF TRUSTEES OF THE L LELAND STANFORD JUNIOR UNIVERSITY	05/15/1997		
	G20	wo	95/24898		COMEDICUS, INCORPORATED	09/21/1995		
	G21	wo	95/05866		CORTRAK MEDICAL INC.	03/02/1995		
	G22	wo	96/00112		CORMEDICS CORP.	01/04/1996		
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Examiner Signature	Date Considered	

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¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁴Applicant is to place a check mark here if English language Translation is attached.

MODIFIED PTO/SB/08 (08-00)

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	Substitute for	or form 1449B	/PTO	Complete if Known		
	INFORMATI	ON DISCLO	SURE	Application Number	10/618,835	
	STATEMEN	T BY APPLI	CANT	Filing Date	7/15/2003	
	Data Cubasi	Hadi lulu 16	2004	First Named Inventor	John P. Cooke	
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Sheet	2	of	3	Attorney Docket Number	080618-0237	

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	NON PATENT LITERATURE DOCUMENTS	
Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
G23	LEFER ET AL., "Role of Endothelium-derived Relaxing Factor as a Cardioprotective Agent in Myocardial Ischemia", <i>Basil, Karger</i> (1990), pp. 190-197.	
G24	IGNARRO ET AL., "Basic Polyamino Acids Rich in Arginine ," Circ. Res. (Feb. 1989), Vol. 64, No. 2, pp. 315-329.	
G25	ROCK ET AL., "L-arginyl-L-lysine and L-arginyl-L-arginine ," <i>Med. Sci. Res.</i> (1990), Vol. 18, pp. 165-166.	
G26	CAYATTE, Antonio J., et al., "Chronic Inhibition of Nitric Oxide Production Accelerates Neointima Formation and Impairs Endothelial Function in Hypercholesterolemic Rabits," Arterioscelerosis and Thrombosis, Vol. 14, No. 5, 753-759 (May 1994).	
G27		
G28	FITZPATRICK, David F., et al., "Endothelium-Dependent Vasorelaxing Activity of Wine and Other Grape Products," American Journal of Physiology, Vol. 265, No. 2, H774-778 (Aug. 1993).	
G29	NARUSE, Kenshin, et al., "Long-Term Inhibition of NO Synthesis Promotes Atherosclerosis in the Hypercholesterolemic Rabbit Thoracic Aorta," Arteriosclerosis and Thrombosis, Vol. 14, No. 5, 746-752 (May 1994)	
G30		
G31	VERMA, et al., <i>Natur</i> e, Vol. 389, pp. 239-242 (1997).	
G32	SHEARS, et al., <i>J. Am. Coll. Surg.</i> , Vol. 187, pp. 295-306 (1998).	
G33	SAWA, et al., <i>Circulation</i> , Vol. 96 (Suppl. II) 280-285 (1997).	
	G23 G24 G25 G26 G27 G28 G29 G30 G31 G32	item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. G23 LEFER ET AL., "Role of Endothelium-derived Relaxing Factor as a Cardioprotective Agent in Myocardial Ischemia", <i>Basil, Karger</i> (1990), pp. 190-197. G24 IGNARRO ET AL., "Basic Polyamino Acids Rich in Arginine ," <i>Circ. Res.</i> (Feb. 1989), Vol. 64, No. 2, pp. 315-329. G25 ROCK ET AL., "L-arginyl-L-lysine and L-arginyl-L-arginine ," <i>Med. Sci. Res.</i> (1990), Vol. 18, pp. 165-166. G26 CAYATTE, Antonio J., et al., "Chronic Inhibition of Nitric Oxide Production Accelerates Neointima Formation and Impairs Endothelial Function in Hypercholesterolemic Rabits," Arterioscelerosis and Thrombosis, Vol. 14, No. 5, 753-759 (May 1994). G27 DREXLER, Helmut, et al., "Effect of L-Arginine on Coronary Endothelial Function in Cardiac Transplant Recipients," Circulation, Vol. 89, No. 4, 1615-1623 (Apr. 1994). G28 FITZPATRICK, David F., et al., "Endothelium-Dependent Vasorelaxing Activity of Wine and Other Grape Products," American Journal of Physiology, Vol. 265, No. 2, H774-778 (Aug. 1993). G29 NARUSE, Kenshin, et al., "Long-Term Inhibition of NO Synthesis Promotes Atherosclerosis in the Hypercholesterolemic Rabbit Thoracic Aorta," Arteriosclerosis and Thrombosis, Vol. 14, No. 5, 746-752 (May 1994). G30 TSAO, Philip S., et al., "L-Arginine Attenuates Platelet Reactivity in Hypercholesterolemic Rabbits," Arteriosclerosis and Thrombosis, Vol. 14, No. 10, 1529-1533 (Oct. 1994). G31 VERMA, et al., <i>Nature</i> , Vol. 389, pp. 239-242 (1997).

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•	Date Submitted. 30	uly 10,	2004	Group Art Unit	1654		
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Sheet	3	of	3	Attorney Docket Number	080618-0237		

		NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. ¹							
77	G34	BAI, et al. <i>Ann. Thorac. Surg.</i> , Vol. 66, pp. 814-820 (1998).						
	G35	LUI, et al., Current Pharmaceutical Design, Vol. 2, pp. 553-584 (1996).						
	G36	MARSHALL, et al., <i>Science</i> , Vol. 269, pp. 1050-1055 (Aug. 1995).						
	G37	ORKIN, et al. "Report and Recommendations of the Panel to Assess the NIH Investment on Research in Gene Therapy", (1995).						
	G38	ROČIĆ ET AL., "L-arginyl-L-lysine and L-arginyl-L-arginine", Med. Sci. Res. (1990), Vol. 18, pp. 165-166.						
	G39	ADAMS ET AL., "Oral L-Arginine Inhibits Platelet Aggregation but Does Not Enhance Endothelium-Dependent Dilation in Healthy Young Men", <i>JACC</i> (October 1995), Vol. 26, No. 4, pp. 1054-1061.						
	G40	MAYER ET AL., "Homocysteine and Coronary Atherosclerosis," <i>JACC</i> (March 1, 1996), Vol. 27, No. 3, pp. 517-527.						
	G41	Supplementary European Search Report dated May 12, 2004 for EP Application No. 97938163.9						
	G42	International Search Report dated August 29, 1994 for PCT Application No. PCT/US94/06203.						
	G43	International Search Report dated January 21, 1997 for PCT Application No. PCT/US96/17241.						
	G44	International Search Report dated October 10, 1997 for PCT Application No. PCT/US97/13905.	-					

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